Before the **FEDERAL COMMUNICATIONS COMMISSION**

Washington, D.C. 20554

In the Matter of

Public Notice. Regarding

Vermont Transco, AMTS rule waivers

DA 11-311

WT Docket No. 11-26

To the Chief, Wireless Telecommunications Bureau

Statement

Errata copy*, and Addition

For the public interest reasons shown herein and for a more full and complete record,

Petitioners ask that this expanded copy of their Statement be accepted at this date, filed on ECFS

past midnight of the due date for Reply Comments but before the start of the next day. No party

will be prejudiced by this nominally late filing.¹

"Petitioners," the undersigned entities, submit the following statement, including to oppose parties other than Vermont Transco that, in this docket, generally advocate AMTS rule waivers, including Maritime Communications/ Land Mobile LLC ("MCLM") and its various spectrum assignees represented by the Keller & Heckman law firm and other parties.

Petitioners advocate use of AMTS as described in the Exhibit hereto (from a previous FCC filing by Petitioners). In the case of Vermont Transco ("Transco"), Petitioners have, as previously formally stated to the FCC, maintained sufficient AMTS spectrum in Vermont and

^{*} In this copy: Errata additions in dark red. Substantive additions are in the section "Additions." Page margins have been changed. A certificate of service is added and executed.

¹ Also, service copies will be postmarked today, the same as if served (placed into the US Postal Service system) after business hours yesterday, and thus will be delivered on the same day as if this expanded Statement were filed and served yesterday prior to midnight but after business hours.

the adjacent States (including along Lake Champlain and other navigable waterways in the region of the nation) to provide for the maritime services and wider transportation services using AMTS spectrum described below, independent of however Transco decides to use its AMTS spectrum, which one of Petitioners sold to Transco. While Petitioners believe that all ATMS licensees will serve the public interest by acting in accord with the attached statement, Petitioners retain sufficient AMTS spectrum to effectively pursue that purpose in the areas of and surrounding Transco and all other areas of the nation in which they hold AMTS spectrum at this time and including all areas in which in the past they sold any amount of AMTS spectrum.

Addition

The MCLM Comments filing in this docket is impermissible due to not being served upon Petitioners. Petitioners are AMTS licensees and hold co-channel and adjacent channel AMTS spectrum in the areas of and surrounding Transco, and the MCLM Comments were directed towards one of Petitioner's sale of AMTS spectrum to Transco, making that entity, Environmentel LLC, a party. Moreover, the MCLM Comments are clearly "written presentations" as defined in FCC rule §1.200 in the restricted licensing proceedings MCLM discusses (various MCLM assignments of AMTS spectrum regarding which Petitioners have submitted petitions to deny). For this reasons also, the MCLM Comments in this proceeding are unlawful since there were not served upon the Petitioners that hold AMTS spectrum and otherwise challenged MCLM in those proceedings. The MCLM comments speak about "Havens" and show a service copy to Warren Havens, but he does not hold any AMTS spectrum, and the filings executed by Warren Havens that MCLM comments on where by companies he manages. Any mail not addressed to a company that is a party, is not served up that party by

addressing it to some other party even at the same address.²

MCLM has no AMTS spectrum in or anywhere near the Transco area in the State of Vermont. While anyone can submit comments in a FCC public proceeding, that does not create party interest or legal standing. The FCC has no obligation to consider the Comments of MCLM in this proceeding for this reason also. Petitioners, however, have AMTS co-channel spectrum along Transco borders to the south and west, and has adjacent channel AMTS spectrum along all of Transco's US borders, and thus, Petitioners have interest and standing, if any waiver sought in this proceeding may potentially affect said co-channel or adjacent channel use by Petitioners. While use-rule waivers sought here are not technical rule waivers, changes in uses may result in changes in actual uses of the spectrum that can change co-channel and adjacent-channel effects of one licensee's operation verses another's. As stated herein, Petitioners made arrangements when selling spectrum to Transco to retain sufficient AMTS spectrum and also to secure a border spectrum sharing agreement with Transco, to protect the interests describes in the attachment hereto. However, Petitioners oppose the attempts by MCLM-HK to use this Transco proceeding for their AMTS sales and lease laundering purposes around the nation.

Petitioners reference and incorporation herein³ the facts and arguments they have

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² This writer, the undersigned, is Warren Havens. I have instructed persons at offices at 2509 Stuart Street, Berkeley CA 94705 (one of the properties in Berkeley that I own or manage) to not process any mail addressed to me personally. That is processed separately from mail to companies I manage by the companies' staff by me and personal assistants. I will not be an agent to assist MCLM or other parties in curing defective service upon companies I manage. I have instructed MCLM for years to cease labeling companies I manage as "Havens" and cease serving them as "Havens." I do not address MCLM as "Brown" or "Dennis Brown" or "Depriest." MCLM obviously employs these devices to suggest that the companies I manage are not substantial or separate legal businesses. By this petty device, MCLM creates for itself the defect of failure of service noted above.

³ In FCC and other administrative pleadings, and court pleadings, reference and incorporation is common and acceptable where it is relevant. The FCC itself uses it in proceeding, e.g., in DA 96-2183.

submitted in opposition to MCLM, Keller & Heckman, ⁴ and associated parties seeking assignment of AMTS spectrum from MCLM, with various rule waivers, in other dockets and proceedings, including WT dockets 11-27 (regarding AMTRAK) and 10-83 (regarding SCRRA) and the proceedings referenced by Keller & Heckman in its ex parte letter to Ruth Milkman of the FCC dated January 28, 2011 (that was unlawful since it was not served upon Petitioners entities). The referenced facts and law are specifically only that pertain to waivers of FCC rules regarding AMTS that are subject of the above-captioned docket, and in particular the rules waivers which MCLM comments in this docket should be granted to MCLM assignees, or to MCLM for its assignees or MCLM other purposes.⁵

Petitioners informed Transco when seeking to purchase AMTS spectrum from Petitioners (which eventually lead to the AMTS license now held by Transco) that Keller & Heckman law firm had represented in FCC matters MCLM's predecessor in interest, Mobex, which fact is shown in FCC public records. Petitioners also informed Transco of Mobex and MCLM violations of FCC law including fraud and disqualifying violations in Auction 61, and thus, why Petitioners had objections to Keller & Heckman participation in some of these matters: these were also in and remain in FCC public records. After being so informed, and having access to those public records, Transco's choice of legal counsel was and is its own, but Petitioners gave to Transco the preceding public information and its objections for good cause, and based on that,

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⁴ Herein, by Keller & Heckman we mean the law firm by that name at the address shown in the certificate of service below. Petitioners object as explained herein to certain actions by some actions taken in the name of that firm by some attorneys in the firm. Petitioners do not now the role in those actions, if any, by Mr. Kunkle of that firm which Petitioners find listed as the contract person on the subject Transco waiver request. But in any case, Petitioners find in FCC records, and by service of process, that said law firm serves as counsel on matters objected to herein.

⁵ The threshold reason that rule waivers cannot be lawfully granted to MCLM and its license assignees is that its licenses are defective for multiple reasons shown clearly in FCC dockets regarding its licenses, and also in the FCC Enforcement Bureau investigation of MCLM. MCLM, in its comments on the above-captioned matter, evades this threshold issue.

pointed out to Transco the then-existing and potential future conflicts with regard to pursuit of AMTS matters under applicable law.

Keller & Heckman is taking a leading role in sales of MCLM unlawfully obtained and maintained spectrum to various parties in the nation, as reflected (among other places) in the two Heller & Heckman ex parte written presentations this year to Ruth Milkman of the FCC, the first one dated January 21, 2011. Keller & Heckman and the parties it represents and advocates for regarding the MCLM AMTS spectrum, including MCLM-Mobex itself (Mobex became part of MCLM and to this day is maintained, according to court and State of Delaware documents)—a former direct client of Keller & Heckman— have brought into this Transco waiver request proceeding their agenda to launder the defects in the MCLM spectrum: MCLM argued this in its Comments in this docket. That appears planned by Mobex-MCLM- Keller & Heckman ("MCLM-K&H") as a purpose of this Transco waiver proceeding, but in any case, it is caused in fact by the comments of MCLM which reference its pending AMTS assignments to Keller & Heckman clients. Petitioners thus bring their opposition of MCLM-KH") into this docket.

MCLM is incorrect under logic and law to argue that since Petitioners sold AMTS spectrum to Transco, that they cannot legitimately oppose MCLM-KH sales and assignments (and leases) of AMTS spectrum. Petitioners may and do properly challenge those assignments, and also MCLM spectrum leases, first since the MCLM spectrum was fraudulently and unlawfully obtained; second since the rule waivers MCLM and its assignees⁷ seek are for

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⁶ Petitioners do not have information at this time to indicate whether, for any consideration or otherwise, Transco shares in this purpose. However, its counsel Keller & Heckman could not under professional standards not disclose to Transco this MCLM related purpose and Keller & Heckman's leading role in that since it creates a conflict, including that MCLM-KH are using Tranco to aid in laundering MCLM spectrum and as a guinea pig for their mutual AMTS spectrum assignee clients that would use waivers granted to Transco as stepping-stone precedents for their purposes.

⁷ MCLM leases its AMTS spectrum with no waivers for land mobile uses (e.g., to <u>Pinnacle Wireless</u> for its clients, and to <u>NRTC</u> for rural utilities): that is clear in FCC records. According

laundering purpose (assignees have informed the FCC that they do not want spectrum under the assignment applications without the associated rule waivers granted, which are thus for laundering); and also since MCLM and its assignees seek to fully use AMTS for non-maritime and non-transportation purposes in parts of the nation where Petitioners do have sufficient AMTS to pursue these purposes.

Petitioners, for good cause, oppose both the unlawful MCLM-KH laundering by assignments and leases, and their use of waivers to change the fundamental and best use of AMTS for said transportation purposes. As Petitioners explained to the FCC in preceding filings opposing MCLM-KH, in all cases that Petitioners sold AMTS, they specifically retained sufficient AMTS for themselves to effectively pursue the uses of AMTS for maritime and land transportation applications, as described in the attachment hereto, and that includes sufficient quantity of spectrum, and spectrum sharing agreements along the borders of partitioned areas including along costal and inland waterway areas. Thus, Petitioners selling certain quantities of AMTS spectrum in some areas of the US did not deter their effective pursuit of what is described in the attachment below.

However, in sales and leases of MCLM AMTS spectrum by MCLM-KH, it is clear that both MCLM and the assignees and lessees seek wholesale conversion of AMTS from its best and highest critical transportation use, to other uses simply for profit to MCLM-KH, and expedience and short-term cost savings of the assignees and lessees who always argue that AMTS is easier and cheaper to use for radio coverage than available higher frequency spectrum. That, however, is not a good reason to use spectrum for fixed wireless, or general or mixed private mobile radio use. For that, higher spectrum is more suitable, for reasons noted in the attachment below.

to Keller & Heckman, MCLM, and MCLM assignees, however, that use is not permitted without waivers. MCLM did not seek and get the waivers for this leased spectrum and the lessees did not either. *Thus, all the lease use is unlawful:* None is for AMTS under current rules. Also, none involves a granted certificate application under Section 20.9(b) either.

There is far less VHF geographic spectrum to use for critical smart transportation purposes then for said other purposes. The smart transport purposes described in the attachment below need the lower, VHF range spectrum, but the other purposes do not.

In addition, unlike MCLM, Petitioners have sold some spectrum to reinvest fully the gross receipts into their publicly explained public-interest wireless businesses, to support smart transportation and infrastructure, environmental protections and emergency response systems in the nation, with core services at no cost, and a substantial portion of their 217-222 MHz and 900 MHz and other spectrum offered at no cost to government agencies, and others seriously pursuing these matters. In contrast, there has never been presented to the FCC or in the public any description by MCLM-KH of MCLM's plans for any legally valid, what to speak of public interest, wireless service for any of its AMTS spectrum in the nation. The sole MCLM plan described publicly and shown in FCC filings it to bid for the spectrum in Auction with NRTC and Mobex backing as partners and affiliates (but not admitted to the FCC) (and other fraudulently concealed affiliates), then warehouse and sell it off for unjust and unlawful enrichment.

In addition, MCLM is not the lawful owner of the spectrum it seeks to sell, and for which it speaks in its Comments in this docket. Petitioners are the rightful high bidders for all the MCLM geographic AMTS spectrum, and its site-based AMTS spectrum is automatically terminated by action of law including for failing to meet the construction-coverage requirements and also due to permanent discontinuance (FCC rule §§ 80.49, 80.475(a) (1990), 1.946, 1.955 and condition 46 on the licenses). The FCC Wireless and Enforcement Bureaus have evidence of this.

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⁸ See, e.g., the results of Auction 87: licenses purchased by Skybridge, Intelligent Transportation, and V2G LLC (three of the Petitioners). Their purposes is described in the hundred-plus documents at the Scrib link below the signature below.

⁹ See, e.g., the first Internet link in the attachment below.

There are already three pending court cases involving MCLM in US District Courts at this time, one filed against MCLM by Petitioners, and two filed by MCLM that at this time have as defendants persons who had inside information on MCLM unlawful activities that turned that over to the FCC and got sued in return by MCLM. These cases will lead to substantial discovery with regard to MCLM actions, with NRTC, Mobex and others to obtain and dispose of the spectrum held in the name of MCLM. That information will be provided to the FCC. The FCC Enforcement Bureau has been properly informed of these cases.

Respectfully submitted,

Warren C. Havens

President of each Petitioner listed below

Skybridge Spectrum Foundation

ATLIS Wireless LLC

V2G LLC

Environmentel LLC

Verde Systems LLC

Telesaurus Holdings GB LLC

Intelligent Transportation & Monitoring Wireless LLC

Berkeley California

www.scribd.com/warren havens/shelf

510 841 2220 x 30

510 740 3412 – fax

March 21, 2011

With Errata and additions, March 22, 2011

¹⁰ These are all easily accessible on the US courts' PACER system, respectively, *Skybridge et. al. v. MCLM et. al.* (USDC, NJ); *MCLM v. Harmer* (USDC, MS); and *MCLM v. Calabrese* (USCD, FL).

Attachment

(Taken from other FCC filings of Petitioners.)

<u>Description of Petitioners' and AMTS Best Use</u>

Including Petitioners' AMTS-Licenses and
AMTS Applications for Critical Public-Interest
Wireless for Land and Maritime Transportation, and Related

Petitioners hold AMTS geographic spectrum nearly nationwide that is, of course, fully listed under their names on ULS. The page immediately following this Appendix's text is a map depicting their AMTS licenses.

This purpose of this Appendix is to summarily describe Petitioners and their major plans and actions, and why their AMTS is essential for public interest wireless, and thereby further explaining (augmenting the Petition's main text) why the Petition should be granted.

AMTS is a mobile service, created for unique multi-site, full-waterway continuity of coverage and automatic services. It is in the VHF band (which extends up to 300 MHz) and is ideal for long-range mobile coverage. It can also be used for land services. *It is a waste to use AMTS spectrum primarily for fixed land services* (including utility "smart grid" and other telemetry), ¹¹ since those can be performed very well with much higher spectrum for well-known reasons (the end points are known and can be configured for good paths, typically LOS; and higher gain antennas can be used; and less overhead is needed due to less demanding mobile environment, etc.). There is ample higher spectrum for fixed wireless, but there is very little spectrum below the 225-400 MHz military-only band for the services Petitioners plan, described herein—which is the highest and best use of AMTS.

Petitioners also hold licenses nationwide in the 220 MHz, Part 22 "Paging" (from Auction 87), M-LMS, MAS and VPC services. See:

 $\frac{http://www.scribd.com/PTC-Positive-Train-Control-220-MHz-217-222-MHz-Plus-for-Government-Trains-Smart-Infrastructure-Skybridge-Spectrum-Foundation/d/45303607$

 $\frac{\text{http://www.scribd.com/doc/36614169/Sky-Tel-Atlis-900-200-40-MHz-for-Smart-Transport-Energy-Environment-V3-9-10-Public}{\text{V3-9-10-Public}}$

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Also railroad wireless, including for "Positive Train Control" is closer to fixed wireless in ease of coverage, than road-way and peripatetic land mobile wireless, since railroad wireless generally involves coverage along flat or low-grade wide railroad corridors, antennas on relative high train vehicles, ample power, and higher-gain bi-directional base station antennas. For example, GMS-R and TETRA which provide train wireless in Europe and most of the rest of the world outside of North America use 800-900 MHz spectrum, including in less populated areas for high-capacity services for operation of the trains. Coverage is ample due to the reasons just noted.

The LLCs Petitioners are majority owned by Warren Havens of Berkeley California, who serves as their President. They have different other owners and financing, FCC licenses, and other differences, but cooperate as described herein.

Petitioners' nationwide integrated wireless plans for use of their respective FCC licensed spectrum are lead by Skybridge Spectrum Foundation ("Skybridge"). These plans are substantially described in various documents (and document "collections" summaries) at this link:¹²

http://www.scribd.com/warren_havens/shelf.

Skybridge, commenced in 2007, is a nonprofit corporation recognized by the IRS under Section IRC § 501(c)(3) supported by outright charitable donation of FCC spectrum, cash, personnel and other support by the other Petitioners, who do not accept any return consideration.¹³

Skybridge and these supporting other Petitioners (together called "SkyTel" in the abovenoted online published documents at Scribd and Docstoc) began developing and presenting its
plans to the FCC and publicly since approximately year 2001. The core elements have not
changed, which is to use their 200 MHz (AMTS and 220-222 MHz) and 900 MHz (first, MLMS, then latter adding MAS and Part 22 900 MHz) for nationwide advanced wireless for
Intelligent Transportation Systems ("ITS") and compatible "intelligent" or "smart" energy-grid
systems, environmental monitoring and protection, and emergency response, with the core
services (for safety and efficiency of these systems and purposes) at no cost to government and
the general public. Petitioners operate on the principal that business should first be in the public
interest and achieve that, and then make a fair profit. All profits made in all Petitioners have
been, to date (for over 10 years when they began) reinvested in this described plan and on this
principal.

In early 2007, the LLCs Petitioners created and capitalized (including with FCC license donations) Skybridge to advance these plans. *Skybridge is unique in the nation as a nonprofit with major nationwide FCC-license spectrum holdings, and, with its supporting other Petitioners, unique in the above noted plans and principle.* ¹⁴

For redundancy (and since Scrib has had problems with relaying some uploaded documents to search engines that it has not resolved fully), Skybridge recently began publication using Docstoc as well as Sribd. See:

http://www.docstoc.com/profile/warrenhavens01

Under applicable State and IRS law, and guidance from nonprofit-law tax counsel, that is not permitted, and violations result in severe monetary sanctions or loss of tax-exempt status.

The nation's radio spectrum is meant to serve first and foremost the public interest and only secondarily private-party profit. FCC government licensees directly serve, or should, the public interest. Most FCC commercial private-entity licensees do not first and foremost serve the public interest, when that is achieved, it is by "the private markets" in operation, to the degree those are fair, lawful and efficient. What is missing in FCC licensing and wireless business is the US "third sector," the nonprofit private sector. That sector needs to be more active in support of government for public interest wireless including of nationwide scope. Skybridge and its supporting LLCs are doing that, and encourage others to do the same:

Skybridge, including its plans and relations with these other Petitioners, is subject under applicable law to audit by Attorneys General of the States in which it is domiciled and operates (in addition audits by the IRS and State tax authorities), and is also happy to provide any level of detail to other governmental entities with whom it interacts, including the FCC (for any reasonable purpose). Unlike most private businesses, a nonprofit acting in support of government and its public-benefit programs seeks to be public in programs. This is reflected in the Skybridge Scrib and Docstoc links above.

Petitioners planned and executed obtaining this spectrum collection for over a decade, and implemented it when the suitable auctions arose. Skybrige, a nonprofit, by structure and law has no owners and no private-party beneficiaries: its sole purpose stated to and approved by the IRS is to serve at no cost, or on non-profit basis, US governmental entities (Federal, State and local) and their purposes described in their laws and programs for more safe and secure transportation, energy, environment and emergency systems. The other Petitioners, private commercial LLCs, do not have public, venture capital or other financing or owners that create demand for short- or medium- term profit or stock-price performance and thus are able to pursue, with Skybridge, the long-term plans and executions described herein in the public interest.

In 2010, Petitioners (including Skybridge) bought certain 35, 43 and 900 MHz Part 22 licenses in Auction 87 to advance these plans: the 900 MHz for (as rules permit) especially highpower one-way transmission of N-RTK correction data to advanced GPS devices, including in RF-difficult urban areas, for high accuracy location (needed for ITS, rescue and other critical purposes), and the 35 and 43 MHz for nationwide Meteor Burst Communications ("MBC")¹⁵ (which only operates well in 30-50 MHz) also to deliver said N-RTK corrections for high accuracy location nationwide, even in the most remote areas, at very low cost and with quick coverage possible (it will take only 5-10 master stations to cover the nation: the US Department of Agriculture already covers most all of the nation with four master stations for its SNOTEL and SCAN systems using MBC). MBC is the only means to achieve truly ubiquitous coverage in the nation (and far offshore for maritime)¹⁶ of low-data-rate but highly secure, redundant and

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nonprofits do not "compete" with each other to serve government and the pubic, but cooperate for the common goals.

MBC wireless links (from a master station to a remote fixed or mobile transceiver station) *span up to about 2,000 km per link*: the maximum being limited mostly by the curvature of the Earth in relation to the height above the earth of the atmospheric band in which the "meteor bursts" take place. These "bursts" are coherent ionized field created by the vaporization of the constant stream of very small meteors, billions a day over the US, entering the atmosphere: these re-radiate or reflect radio transmissions in the 30-50 MHz range back to Earth (lower frequencies have too much interference and higher ones are not sufficiently re-radiated or reflected back to Earth). With enough base stations and enough channels at each—as Petitioners plan (with spectrum already secured in Auction 87)—a MBC network can approach close to real-time data, and in any case is highly predictable and secure. It is more secure than other forms of wireless and wireline communication for well-know reasons described in Skybridge's Scribd link given above. Petitioners' MBC plans are guided by leading MBC experts in the US, including Dr. Robert Mawrey, Dr. Robert Desourdis, and other wireless experts. (Petitioners have built up substantial expertise in MBC internally, as well.)

See footnote 15 above regarding range. One MBC maritime application (with comments added by Skybridge- SkyTel) is described here (there are many others):

cost-effective coverage: this more critical as "broadband" for many forms of wireless that are critical for "intelligent" transportation, energy, environment and emergency systems. MBC will also can provide a redundant backup up of, and certain augmentation of, GPS due to this ubiquitous coverage, the sub-nanosecond time transfer and synchronization it enables, delivery of N-RTK corrections, etc. ¹⁷ MBC will also provide the most secure and resilient (in man-made or natural wide-area emergencies) means of basic communications. All of these MBC assertions are documented by expert analysis in the Skybridge Scribd link given above, in the Collection on Meteor Burst Communications, as well as in hundreds of other publications by experts.

Skybridge and the other Petitioners (called "SkyTel" for short on Scrib and in other public contexts) have the only spectrum and plan that, upon an objective look at established non-controversial technical and economic expert showings, can provide nationwide ubiquitous backup standby communication, location, and precise-timing services in case of major disasters practically and cost effectively: The network an services will be internally cost effective, and to government entities and critical infrastructure operators provided at no cost or on cost basis. It is also non controversial that apart form terrestrial-origin natural and manmade disasters, larger space-weather events—major solar flares—have the potential to cause far greater and longer lasting disasters. SkyTel's nationwide meteor burst communications in the 35-43 MHz range, linked with mobile ad hoc mesh networks using SkyTel's 200 and 900 MHz, can provide the needed back up communications, location, and precise timing: this will be provided at no cost, or at cost. See, e.g.,

http://www.scribd.com/doc/48737836/Meteor-Burst-Communication-Essential-in-Major-Solar-Flare-Take-Downs-of-Communication-and-Power-Systems

 $\frac{http://www.scribd.com/doc/48737874/DHS-National-Infrastructure-Protection-Plan-note-on-defect-for-lack-of-dedicated-wireless}{}$

These matters are, unfortunately, outside of the common discussion in the private radio community, including before the FCC.

Petitioners' AMTS 200 MHz is a critical component of this disaster-backup wireless, also: it will provide the principal spectrum for coverage between the Meteor Burst relay stations and vehicles, persons and other moving things.

In 2009 and 2010, with University researchers, Petitioner set up and funded a research program at the University of California in nationwide ubiquitous cooperative high accuracy location ("C-HALO") which included a cost-benefit study reflected here:

http://www.scribd.com/doc/43725345/Meteor-Burst-Comm-for-Global-Shipping-Container-Tracking-Globaltrak-Patent-2007.

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Accurate and reliable GPS for location and timing is increasingly essential to the nation's wireless, energy, financial, security, emergency response and other systems, but it is not very accurate in urban areas and some rural rugged-terrain areas, due to satellite blockage and RF multipath. Augmentation is needed in those areas. GPS can also easily be jammed, and may be knocked out by hostile forces, or especially severe solar Coronal Mass Ejections. Augmentation with wireless-delivered N-RTK is one of the solutions for especially high accuracy needed for critical ITS and other purposes, and an independent location system to GPS is needed to back up GPS in case it is jammed or knocked out (which can also provide augmentation).

The final report will be published in early 2011: based on pre-publication summaries given to Petitioners: "...including all types of accidents (fatal and non-fatal), the [annual] benefits are estimated to be: \$160-\$320Billion: 1.1-2.3% GDP." This is solely for core ITS safety and flow-efficiency, and does not include what appear to be (bases on published studies for other nation's planned C-HALO, including Australia) equal or greater benefits to the non-ITS domains that use or need high accuracy location. The total benefits will made C-HALO one of the principal "infrastructures" in the nation (in any nation).

C-HALO and services it enables can only build upon a proper radio-spectrum base. Ideal for this is the spectrum of Petitioners, of which AMTS is critical: (i) The 35 and 43 MHz of Petitioners is for the noted fully ubiquitous (but low data rate: only N-RTK and select limited security and emergency information can be accommodated) MBC, (ii) the <u>AMTS</u> (and certain adjacent 220 MHz Petitioners hold) of Petitioners is clearly needed for the majority of the two-way and one-way communications to vehicle and other things employing C-HALO: for coverage of the nations <u>land</u> and <u>maritime</u> transportation routes for the constant data transmissions needed, and (iii) the 900 MHz of Petitioners (6-7 MHz total in most all parts of the nation) is needed for the highest-traffic areas (cities and some special rural industry and resorts), and for certain terrestrial "multilateration" location to augment GPS (to help resolve the problems noted above in footnote 17.

For vehicle-based radios (that have ample room and power supply), Software Defined Radio ("SDR") and Cognitive Radio ("CR") techniques, using all these bands, an various protocols, will greatly facilitate and increase spectrum efficiencies, capacities and performance.¹⁸

This is the best collection of spectrum for the above-noted critical purposes in frequency ranges and quantities. We challenge anyone to show otherwise, in public published debate. We say that since most opponents or doubters have little real interest or knowledge of these areas and instead use simplistic views and jargon to suggest things that do not stand up to scrutiny, for purposes that, at best, are not in the public interest.

AMTS, as explained above, is a rare spectrum band, needed for the above-noted purposes including since it: (i) is in a frequency range that provides the RF propagation needed (long range and good in high-fading mobile environment) (above 400 MHz is not nearly as good, and 225-400 is all US DOD spectrum); (ii) has an ample amount of spectrum for the data capacity

SDR and CR as just described are substantially advanced and proven in more-recent military wireless, but is only solely being considered by the US professional mobile radio ("PMR") market, including since few in that market have the "greenfield" spectrum to consider major new systems that could justify a move to SDR and CR (long term far better and more spectrum- and cost- efficient, but short term more expensive), and also since that market is *not* forward looking and acting in general, but is lead ("around by the nose") by the dominant equipment vendors, and those with close ties, that do not try for advances they cannot make easy money on, and other reasons far short of good engineering and execution in the public interest (that this PMR market is meant to serve). Petitioners are not part of that constrained PMR market. There is more technical capability in kids toys these days than in most all US PMR radio systems and terminals and that is absurd and damaging.

needed; and (iii) is in block spectrum (not non-adjacent narrow channels) to allow more-advanced technologies than traditional narrowband FDMA, such as certain wider-band OFDM-based technologies (some that are now, and other that will become, available in this range)—all three of which are needed for noted critical purposes that focus on land and maritime ITS transportation.

AMTS should not be wasted on fixed-wireless, since that can use higher frequencies (even above 1 GHz) due to the far more RF friendly paths that can be achieved, vs mobile-communication paths in adverse environments, and since fixed wireless can also use higher power more easily then mobile transceivers. AMTS is a Part 80 maritime band, which is a transportation service. That can and should be extended to land transportation as Petitioners are doing. Transportation traffic peaks in rush hour, when uses for fixed-wireless is relative low, and vice versa. Also, transportation use focuses signal along the major roadways, and generally away from areas of most use for fixed-wireless. This time and space separation allows synergistic support of critical fixed wireless services, along with the primary transportation services, using the same spectrum including AMTS (and to a large degree, the same wireless networks): however, the more difficult and critical transportation services should be the focus, as Petitioners are doing.

Transportation is more critical then the other noted services since it involves, to a far greater degree, safety of life and property, and without the noted C-HALO and the real ITS that can only result from its implementation (spacing of vehicles along and across roadways for flow efficiency, warning of impeding crashes or lane departures, etc.) the nation will continue producing far too much pollution and using far too much fuel (of any kind).

In sum: AMTS is a critical transportation radio band and should remain so: both maritime and land. It should not be hoarded and blocked from the above purposes unlawfully, as PSI and MCLM are doing.

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Use of some modest amount of 217-222 MHz for railroad PTC is reasonable, but (1) PTC is <u>not</u> reasonable *as a stand-alone application* to justify new wireless for railroads (including by use of tax-payer "stimulus" or other funds): that <u>is</u> the conclusion, shown in detail, of objective experts, (2) the PTC signaling itself will use only a modest amount of wireless data, (3) railroads already have VHF high-band and 900 MHz that is not used well including with more advanced spectrum-efficient equipment, and (4) railroad are very major entities that have ample financial and planning resources to plan for and bid in future auctions to buy spectrum they need (if indeed they need more)—BUT the US public land and maritime transportation markets cannot plan and go into auctions: the vast majority of persons using road vehicles and boats, and even most government and private fleet operators: That, combined, is a far larger transportation activity than railroads.

Certificate of Service

I, Warren C. Havens, certify that I have, on this 22nd day of March 2011, caused to be served by placing into the US Postal Service mail system with first-class postage affixed a true copy of the foregoing "Statement, Errata Copy and Addition," to the below-listed parties.²⁰

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Catalano & Plache, PLLC Albert J. Catalano & Matthew J. Plache Legal counsel to Pinnacle Wireless, Inc. 3221 M Street, NW Washington, DC 20007

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²⁰ Said delivery to the US Postal Service may be after business hours, and if so, the postmark will be the following business day.